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SLIDES: A Water Manager's Perspective: A View from the Field

Jeffrey Kightlinger

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A Water Manager's Perspective: A View from the Field

Jeffrey Kightlinger
The Metropolitan Water District
of Southern California

June 2003

Report On Metropolitan's Water Supplies

■ Premise

- Retail water supply reliability is dependent on the development of both local and supplemental imported water supplies

■ Law (SB221 / SB610)

- Require new, large-scale developments to provide substantial evidence of available supplies in the event of drought

■ Objective

- Demonstrate a comprehensive plan to provide sufficient supplemental supplies
- Assist member agencies and local agencies in complying with SB 221 and SB 610

Where Southern California Gets its Water

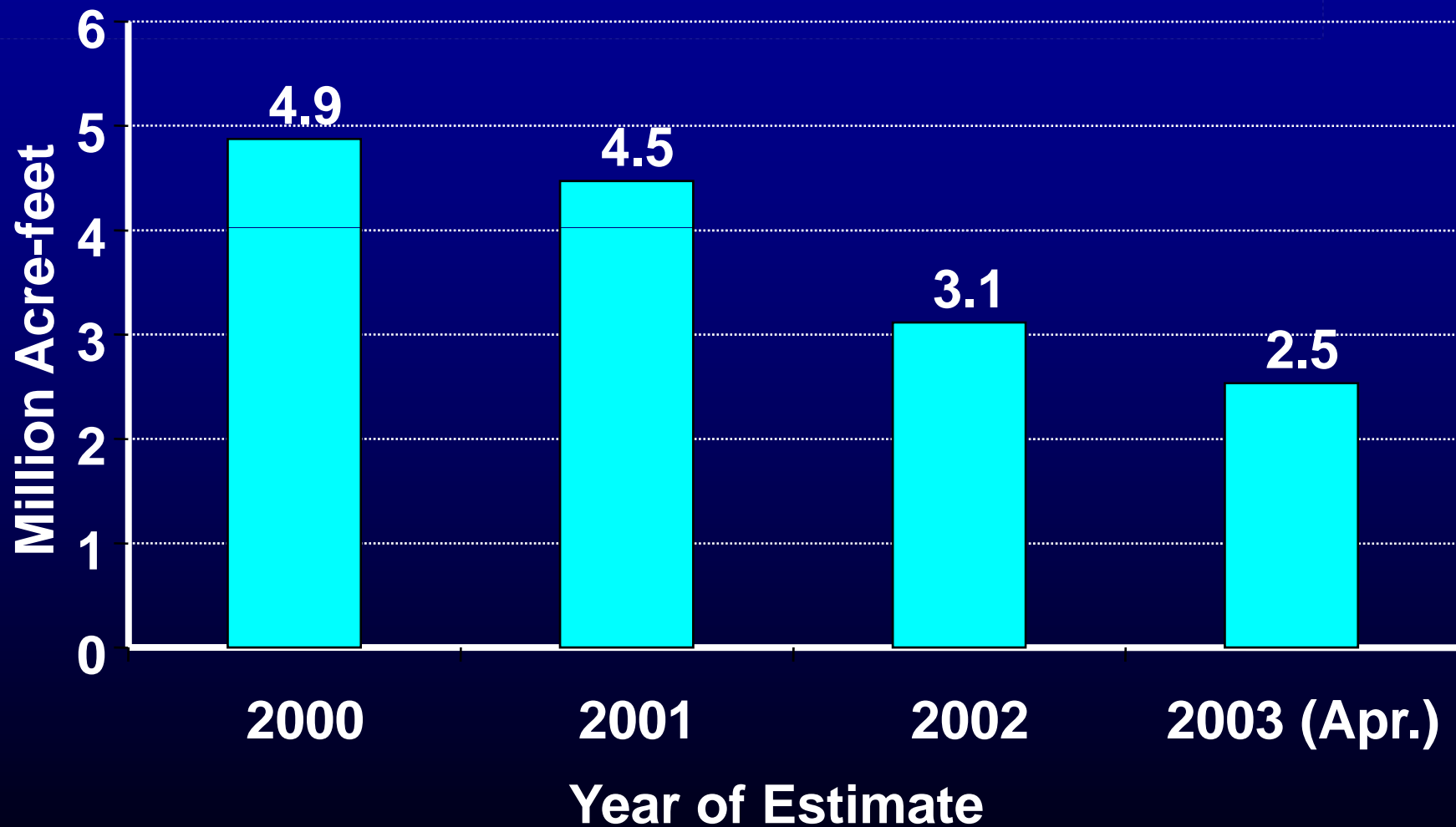


Changed Conditions for Southern California Resources

■ Challenges

- Reduced Colorado River deliveries

Total Surplus Available to MWD (with QSA 2004 through 2016)



Changed Conditions for Southern California Resources

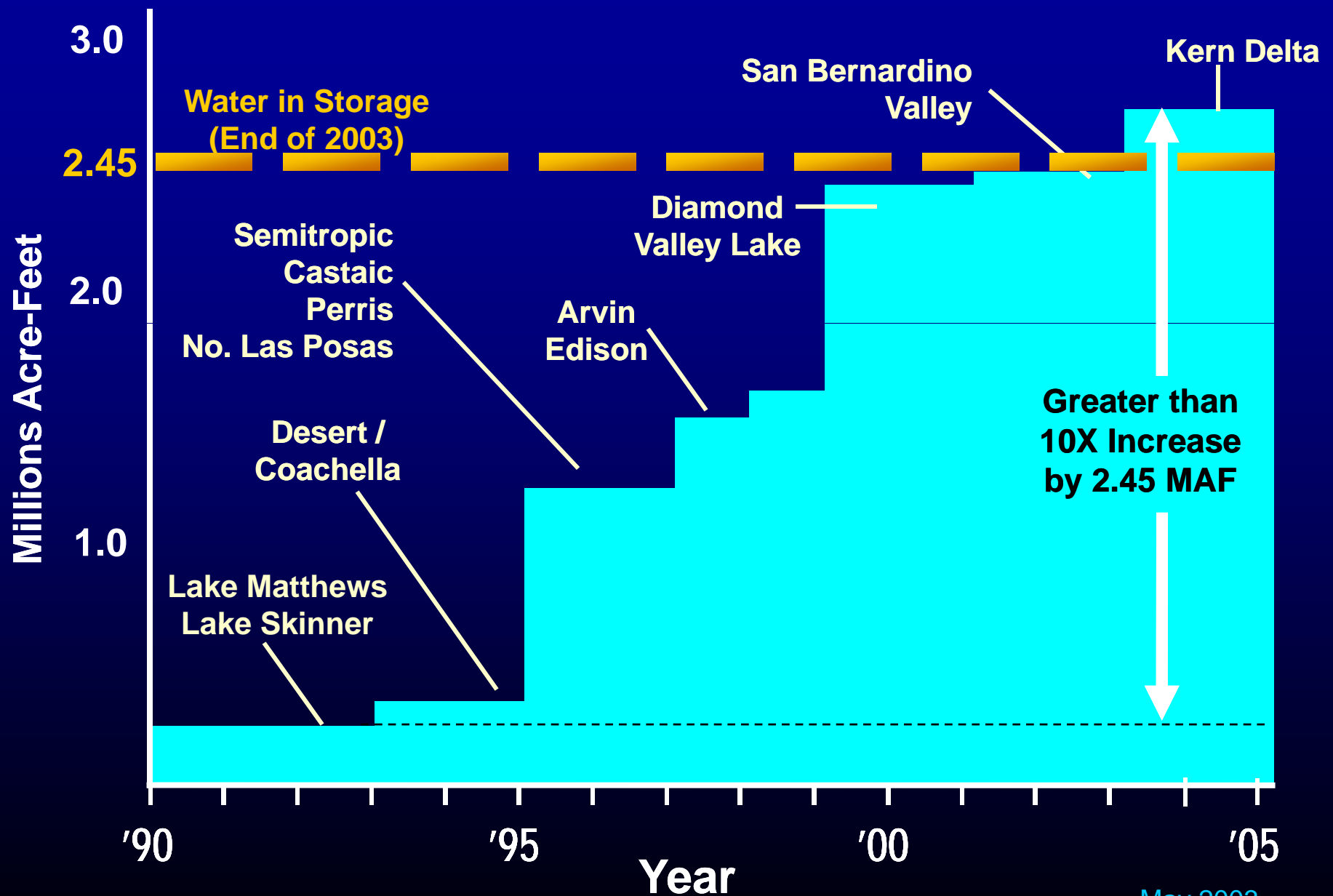
■ Challenges

- Reduced Colorado River deliveries
- Water quality constraints

■ Opportunities

- Full Diamond Valley Lake
- Re-operation of storage and transfers

Metropolitan's Storage Capacity



May 2003

Changed Conditions for Southern California Resources

■ Challenges

- Reduced Colorado River deliveries
- Water quality constraints

■ Opportunities

- Full Diamond Valley Lake
- Re-operation of storage and transfers
- Enhanced conservation measures
- Additional local resources

Conservation & Recycling

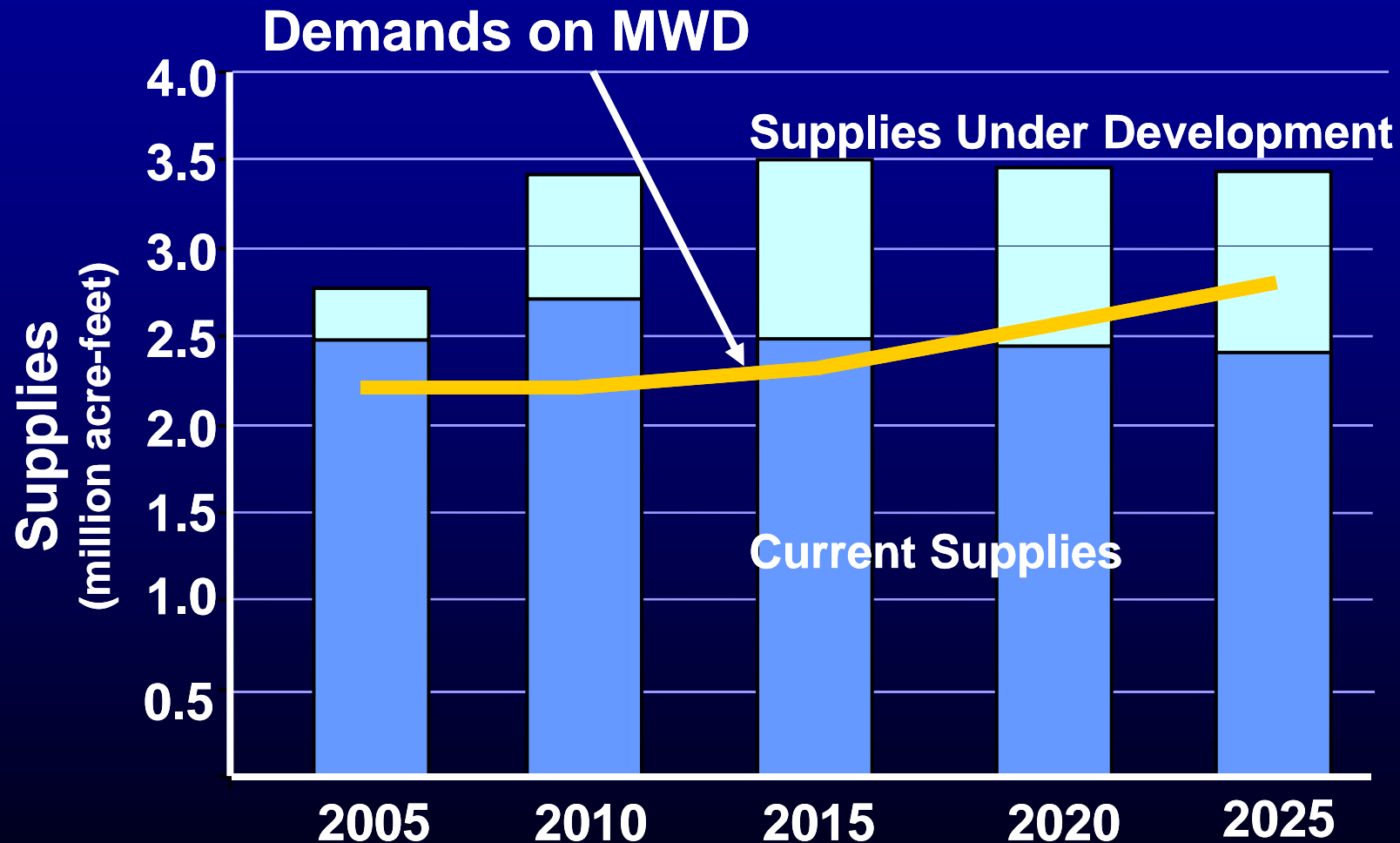


Cumulative Investments:	As of 2000	By 2020
Conservation	\$220 mil	\$1,300 mil
Recycling	\$1,200 mil	\$4,100 mil
Total	\$1,420 mil	\$5,400 mil

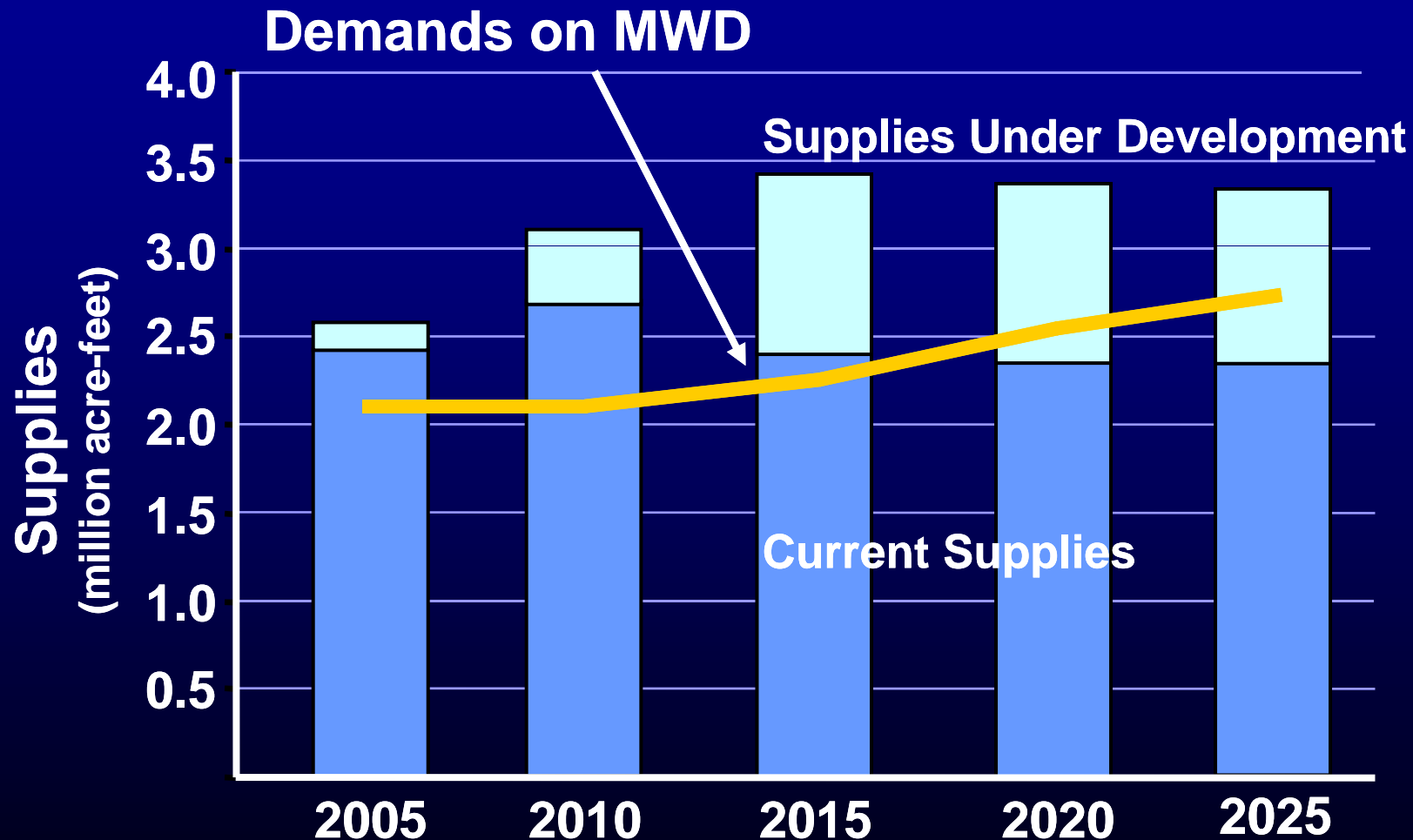
Metropolitan's Supply Inventory

- Colorado River Aqueduct Deliveries
- California Aqueduct Deliveries
- In-Basin Storage Deliveries

Multiple Dry-Year Supply Capability & Projected Demands



Single Dry-Year Supply Capability & Projected Demands



Colorado River Aqueduct Deliveries

Current Program Capabilities

- Terms: 2033 to perpetuity
- Storage Capacity = 800 TAF
- Max Dry-Year deliveries:
 - 721 TAF/Yr in 2005
 - 837 TAF/Yr in 2025

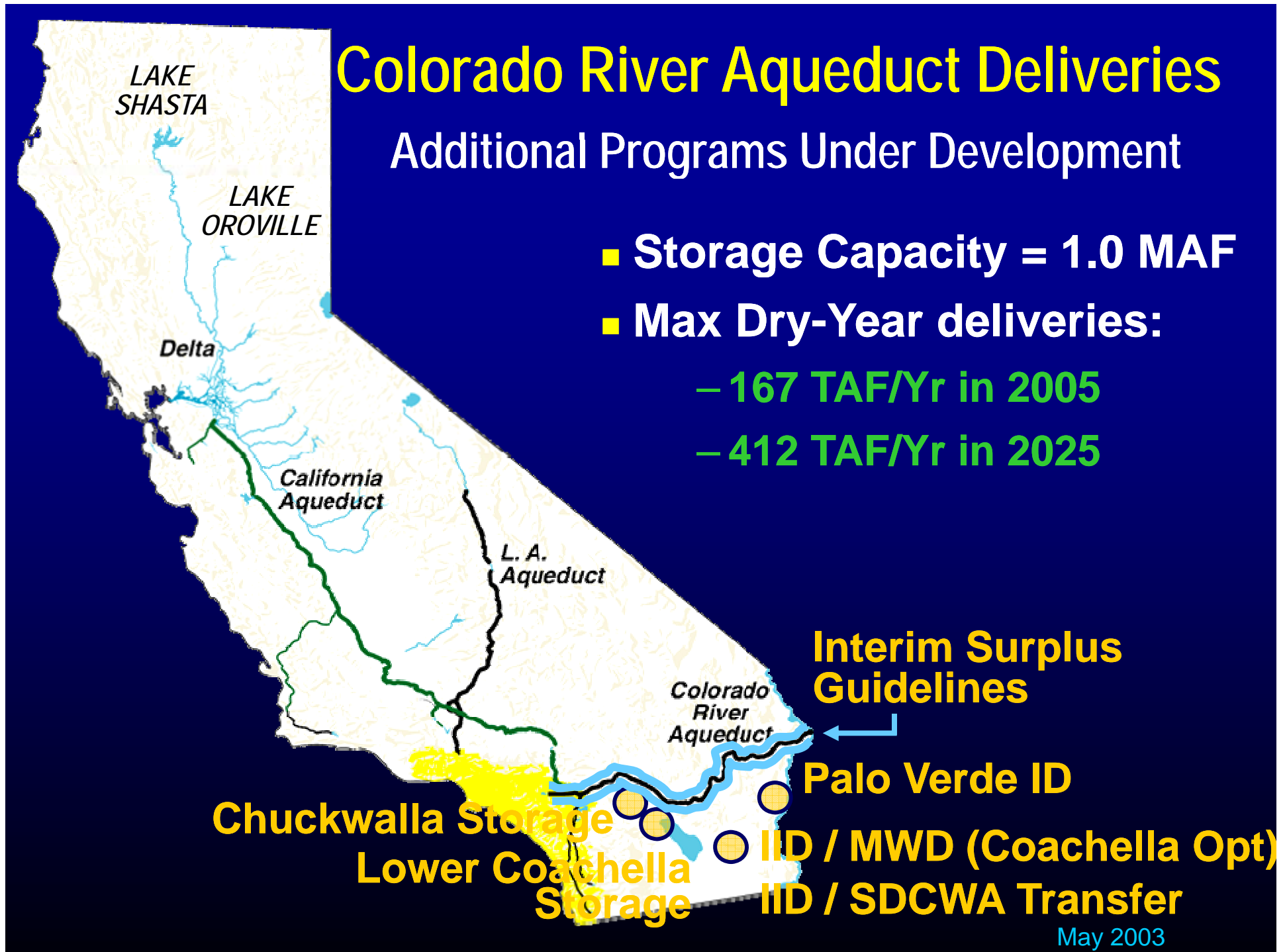


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Colorado River Aqueduct Deliveries

Additional Programs Under Development

- **Storage Capacity = 1.0 MAF**
- **Max Dry-Year deliveries:**
 - 167 TAF/Yr in 2005
 - 412 TAF/Yr in 2025



California Aqueduct Deliveries

SWP Entitlement Deliveries

- Contract term: 2035
- Based on historical record
- Deliveries = .418 – 1.741 MAF/Yr



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California Aqueduct Deliveries

Current Banking / Transfer Programs

- Contract terms: 2028 – 2035
- Storage Capacity = 1.1 MAF
- Max Dry-Year deliveries
= 330 TAF/Yr (10 months)



The map shows the state of California with several aqueducts and delivery points marked. The California Aqueduct is shown as a green line running from the Delta in the north to the south. Other aqueducts shown include the L.A. Aqueduct, Colorado River Aqueduct, and Kern Delta. Delivery points are marked with blue circles and labeled in yellow text: Semitropic, Kern Delta, Arvin-Edison, San Bernardino, and Coachella. The Delta is also labeled. Lakes Shasta and Oroville are shown in the north. A yellow shaded area is visible in the south, near San Bernardino and Coachella.

Semitropic

Kern Delta

Arvin-Edison

San Bernardino

Coachella

California Aqueduct Deliveries

Current Transfer Options

**Sacramento
Valley Transfers**

**DWR Drought
Water bank**

- Single & multiple
- year options
- Market available every year
- Up to 250 TAF in 2003

**San Joaquin
Valley Transfers**

San Bernardino

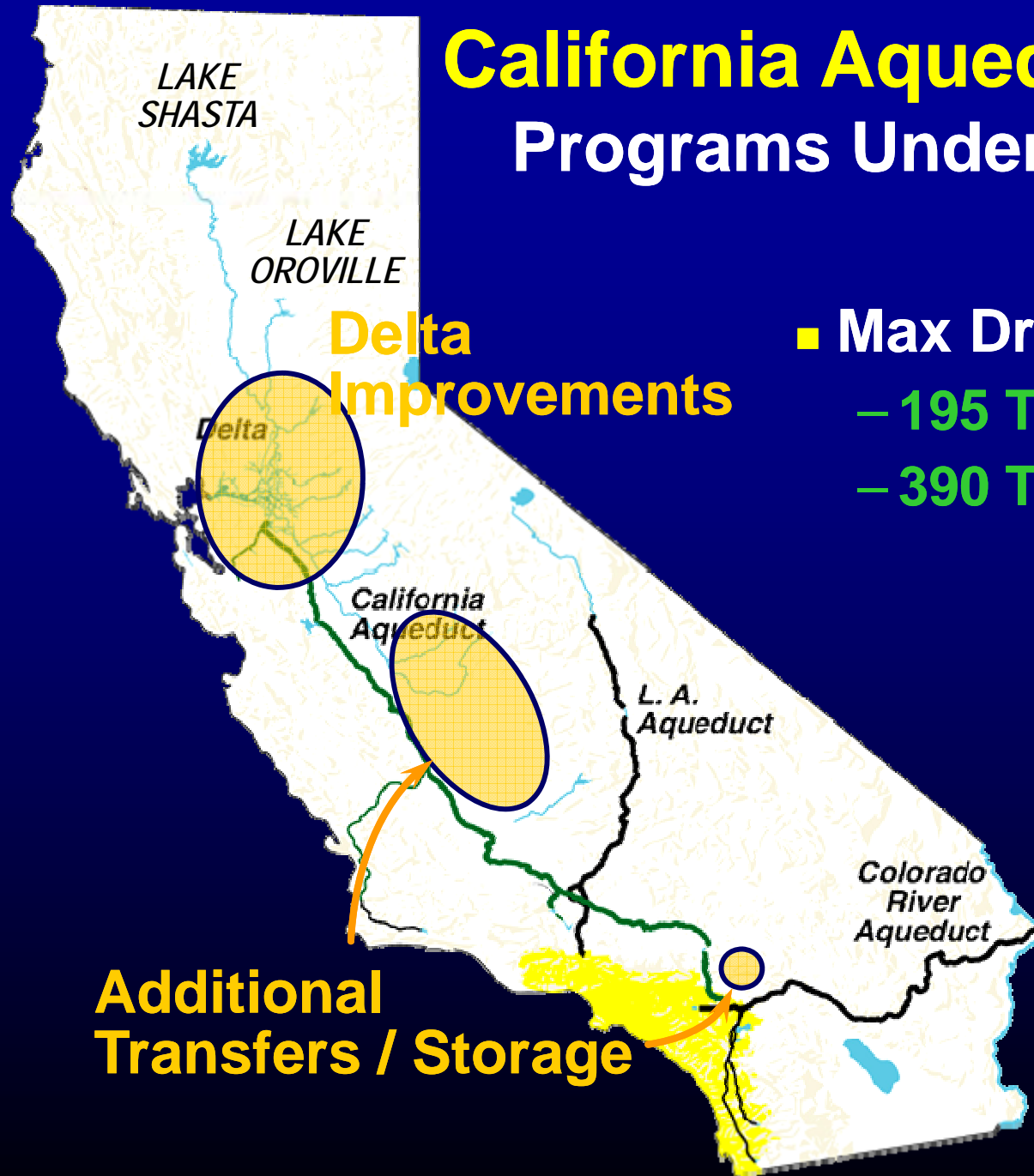
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California Aqueduct Deliveries Programs Under Development

- Max Dry-Year deliveries:
 - 195 TAF/Yr in 2010
 - 390 TAF/Yr in 2025

**Additional
Transfers / Storage**

**Delta
Improvements**



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In-Basin Storage Deliveries

Current Reservoir Capabilities

With a Full DVL:

- Integrate Metropolitan & DWR reservoirs
- Total storage capacity = 1.67 MAF
 - Emergency = 30%
 - Dry-year = 70%
- Max Dry-year return = 600 TAF/Yr

Pyramid Lake

Castaic Lake

Lake Perris

Lake Mathews

Diamond Valley Lake

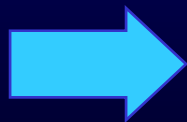
Lake Skinner

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In-Basin Groundwater Storage Programs

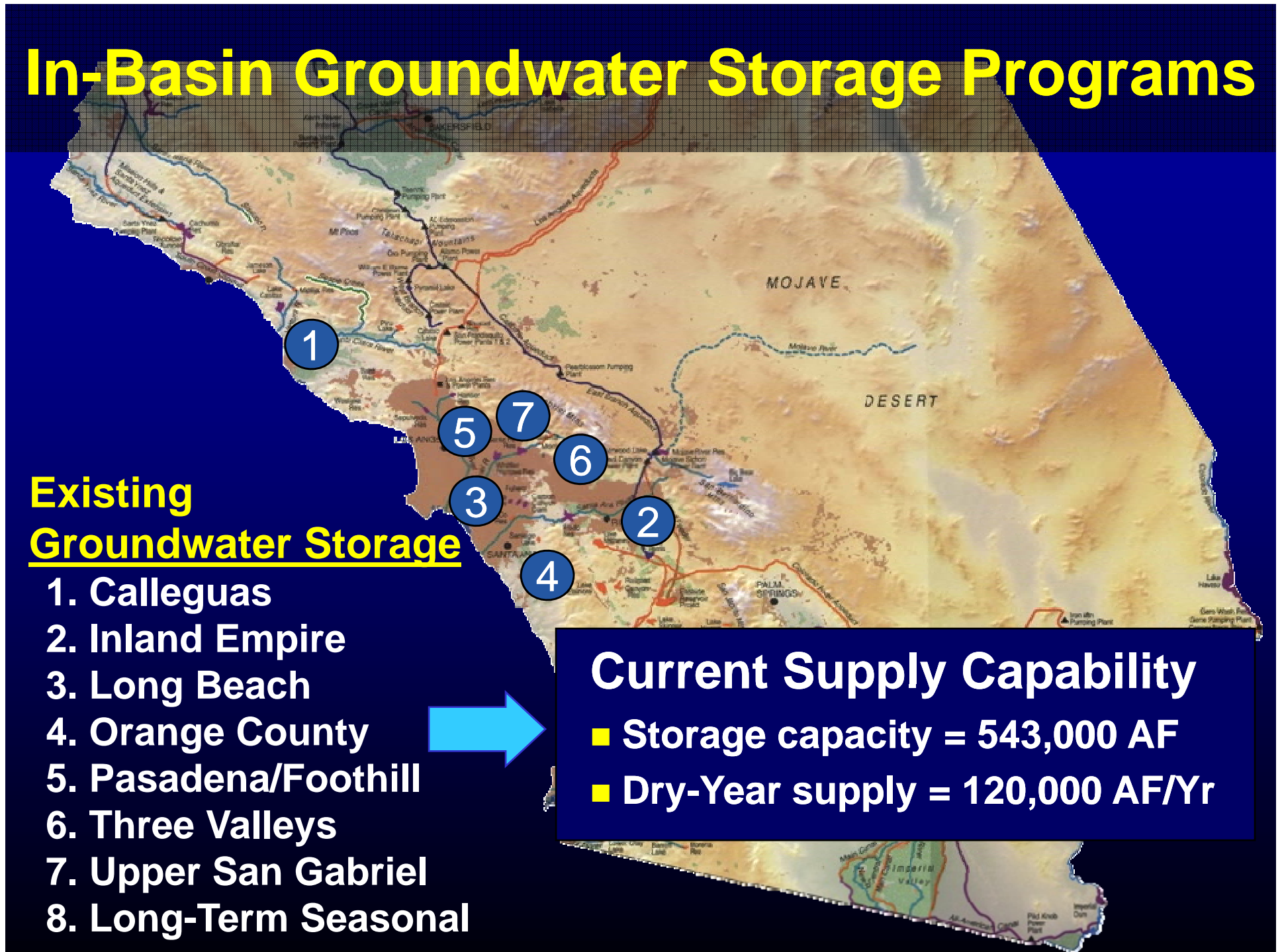
Existing Groundwater Storage

1. Calleguas
2. Inland Empire
3. Long Beach
4. Orange County
5. Pasadena/Foothill
6. Three Valleys
7. Upper San Gabriel
8. Long-Term Seasonal



Current Supply Capability

- Storage capacity = 543,000 AF
- Dry-Year supply = 120,000 AF/Yr



In-Basin Groundwater Storage Programs

Additional Programs

- Storage capacity = 272,000 AF
- Dry-Year supply = 90,000 AF/Yr

Existing Groundwater Storage

1. Calleguas
2. Inland Empire
3. Long Beach
4. Orange County
5. Pasadena/Foothill
6. Three Valleys
7. Upper San Gabriel
8. Long-Term Seasonal

Additional Prop. 13 Groundwater Storage

9. Inland Empire
10. Foothill
11. Three Valleys
12. San Diego -- Mission
13. Orange County
14. Pasadena/Foothill
15. San Dieguito

